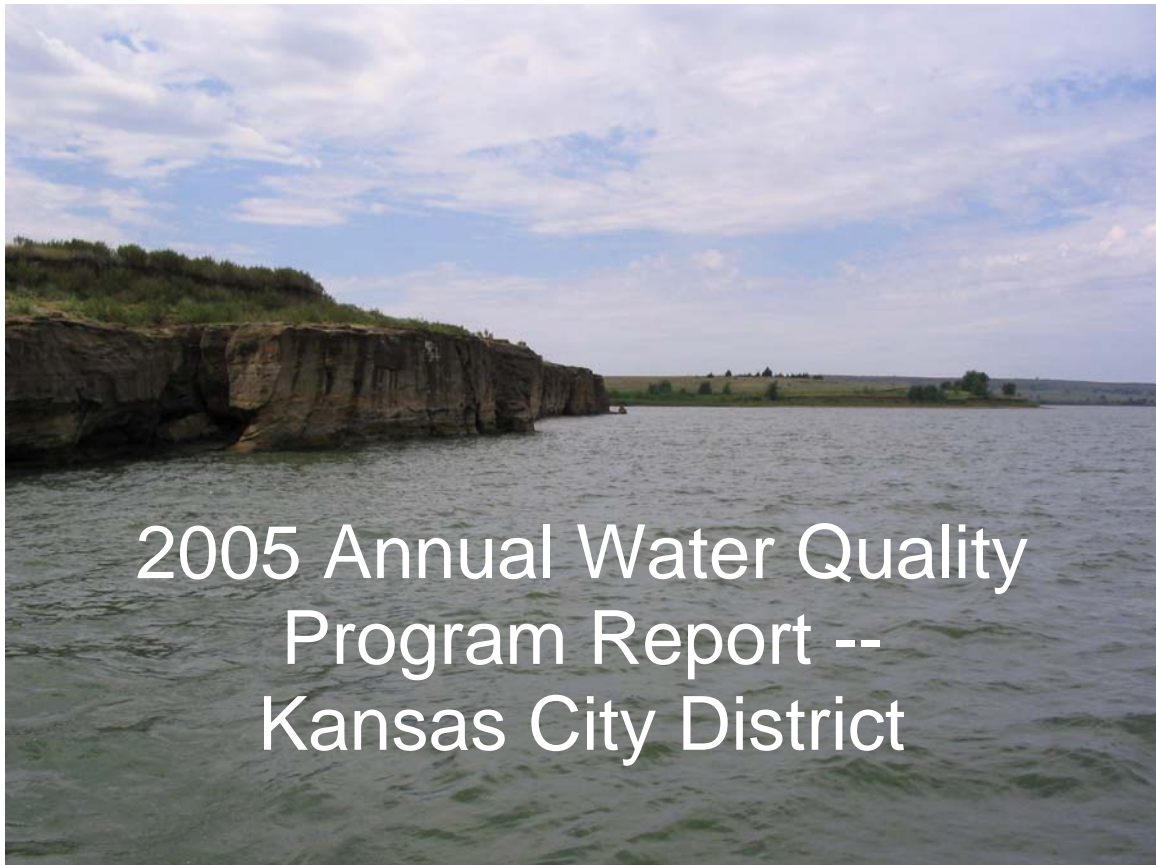




U.S. Army Corps of Engineers
Kansas City District



Wilson Lake Site 9

May 2006

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2005 Annual Water Quality Program Report – Kansas City District

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Vision Statement

Provide a reliable and responsive surface water quality monitoring program to all 18 of the district's lake watersheds, Civil Works projects, and the lower Missouri River.

Mission

Operate in concert with the Operations Division to form one seamless team. We will provide support and solutions through timely and helpful communication with our customers and partners. We respond to emerging issues by increasing our knowledge through technical courses and training workshops. Program integrity allows us to complete our mission in a reliable manner.

1 Introduction

The Water Quality Program is responsible for surface water quality issues related to all waters under the district's jurisdiction. All groundwater related issues are handled by other programs within the district.

Water quality is an integral component of all Corps civil works missions. The Kansas City District is mandated to meet federal and state water quality standards and stewardship responsibilities at such civil works projects. These standards and responsibilities are described in the Corps Engineering Regulation – *Water Quality and Environmental Management for Corps Civil Works Projects (ER 1110-2-8154, 1995)*, and Corps Environmental Operating Principles.

According to ER 1110-2-8154, an ongoing water quality monitoring program is necessary at all Corps projects. Such data is essential to effectively understand and manage the natural resources of the Corps water projects. Districts must also develop specific water quality management objectives for each project, including an outline of detailed procedures to be implemented to meet stated objectives. Those objectives must be included in the project water control plans, which are reviewed and updated at least once every 10 years. Water quality is an integral part of water control management.

Finally, ER 1110-2-8154 states -- “The water quality program provides one of the greatest opportunities for the Corps to demonstrate its commitment to environmental leadership, conservation, restoration, and stewardship.”

1.1 Delivery Team

The Kansas City District's Water Quality Program is comprised of the following individuals:

Program Manager:	Steve Fischer, Limnologist (CENWK-PM-PR-W)
Section Supervisor:	Dr Chris White (CENWK-PM-PR)
Primary Support Staff:	Trevor Cropp, Student Intern (University of Kansas)
Secondary Support Staff:	USACE, Kansas City District Operations Division – Operations Managers USACE, Kansas City District Operations Division – Park Rangers USACE, Chemical and Materials Quality Assurance Laboratory (CMQA) – Omaha Laboratory

In addition, data generated by this program is shared with the following non-Corps watershed stakeholders:

- State Water Quality Agencies
- State Fisheries Agencies
- Universities

- Watershed alliances

1.2 Connection to Strategic Plan

A Program Management Plan (*Program Management Plan, Kansas City District, Water Quality Program*), will serve as the operating guidance document for implementation of the US Army Corps of Engineers, Northwest Division, Kansas City District's (NWK) Water Quality Program. Please reference that document regarding specific program goals, objectives and strategies for implementation of the NWK's Water Quality Program.

1.3 Connection to Annual Work Plan and 2005 Accomplishments

Below is a description of accomplishments for the Water Quality Program during the previous calendar year. Accomplishments are divided into seven categories (Monitoring and Assessment, Data Management, Technical Support, Program Development and Evaluation, Interagency Coordination, Staffing, and Miscellaneous) to best track annual activities.

1.3.1 Monitoring and Assessment

Specific details on water quality assessments conducted during the past year are described in detail below and later sections of this report.

1.3.1.1 Lakes

Water quality monitoring was conducted at all 18 NWK lakes from May through September during 2005. The three-year rotational schedule requires categorizing lakes as either 'Ambient' or 'Intensive' in terms of monitoring effort (see WQ Program Management Plan for details). For 2005, 'Intensive' lakes were: Harlan County, Wilson, Pomona, Tuttle Creek, Pomme de Terre, and Smithville. The remaining 12 lakes were categorized as 'Ambient' lakes during the past year. In addition, we continued the cooperative monitoring effort with Iowa State University and Iowa DNR in the Rathbun Lake watershed. Details on status and trends of specific water quality variables are provided by lake in sections 2 – 20 of this report.

1.3.1.2 River

No monitoring was conducted on the Missouri River during 2005.

1.3.2 Data Management

Laboratory data currently is entered and stored as Excel files (*.xls), while Hydrolab DataSonde data is downloaded as a *.csv file. Historic data (1995 – 2004) was located, compiled, consolidated into lake specific folders by year and then stored in P:/KC Water Quality/. The T: drive is accessible via the internal network. In addition, a CD back-up was created and is stored at the Troost Lab. The back-up is updated at least two-times per year. No data was stored nor entered into either DASLER or STORET since training had not been received as of yet.

1.3.3 Technical Support

Technical assistance was requested and provided to the following NWK projects during 2005:

- Tuttle Creek dam modification project (Dave Hoover)
- Truman stilling basin repair project (Rich Skinker)
- Missouri River shallow water habitat project (Glenn Covington & Dave Hibbs)
- Truman Dam DO monitoring system upgrade (Greg Hutingner)
- Perry Lake bryozoan identification and information (Ken Wade)

Technical assistance and/or data needs were requested and provided externally to the following during 2005:

- KDHE
- Iowa DNR
- Iowa State University
- Smoky Hill / Big Creek WRAPS
- Upper Wakarusa WRAPS
- Smithville Lake Watershed Association

1.3.4 Program Development and Evaluation

A draft Program Management Plan was developed and reviewed both internally (Dr Chris White) and externally (Dave Jensen, NOW). The PMP awaits approval by NWK Civil Works. Staffing limitations prevented development of SOP manuals as highlighted in the 2005 Work Plan.

1.3.5 Interagency Coordination

Contact was made with staff at the following federal and state agencies during 2005: EPA, USGS, KDHE, MDNR, MDOC, IDNR, and NEDEQ. Data was shared with KDHE and IDNR for the following lakes: Tuttle Creek, Hillsdale, Pomona, Melvern, Milford, and Rathbun. Sampling was coordinated with KDHE for lakes in Kansas. Contact was made with watershed groups associated with the following lakes: Kanopolis, Clinton, Tuttle Creek, Melvern, Hillsdale, Pomona, Smithville, and Rathbun. One noticeable weakness of watershed protection and restoration efforts by these NGO groups is the lack of data collection and monitoring. Thus, the NWK WQ program can provide a vital service to such efforts by providing status and trend data.

1.3.6 Staffing

Although the NWK Water Quality Program currently only consists of a one full-time person (GS-12 Limnologist), two unfilled positions still remain on the books (GS-12 Limnologist and GS-11 Biologist). A summer intern was utilized during the summer months (June – August) to assist with data mining, data back-up, and field sampling. This assistance was invaluable to jump-start the WQ program during 2005.

1.3.7 Miscellaneous

One of the major miscellaneous activity tracking categories involves communication. Communication is vital to maintain program integrity and exposure, both internally as

well as externally. It is the key method of promoting USACE involvement in watershed activities.

1.3.7.1 Communication

1.3.7.1.1 Meetings

The following meetings were attended during the past calendar year:

- Missouri Water Quality Coordination Committee
- University of Kansas, Kansas Biological Survey
- Water and the Future of Kansas
- Rathbun Lake
- Smithville Lake Watershed Association
- Upper Wakarusa WRAPS
- Smoky Hill River WRAPS
- Kansas WRAPS Conference
- EPA Region 7 Fish Tissue Contaminant Work Group
- NALMS (Madison, WI)

1.3.7.1.2 Presentations

USACE water quality data was presented at the following meetings / conferences:

- Upper Wakarusa WRAPS – rural subcommittee meeting – December 2005
- Missouri Natural Resources Conference (Osage Beach, MO) -- February 2006
- Upper Wakarusa WRAPS – urban subcommittee meeting – March 2006

1.3.7.1.3 Articles

An article was written for the University of Missouri Lake Volunteer Monitoring Program's winter newsletter (*The Water Line*). It highlighted the NWK Water Quality program and provided an overview of water quality issues at the seven lakes within Missouri.

1.3.7.2 Training

Training was received for specific topics as listed below:

- FLUX software / modeling – NALMS Conference (Madison, WI); November 2005
- Bathtub software / modeling – NALMS Conference (Madison, WI); November 2005